

REMARKS

Applicants respectfully request reconsideration of this application as amended. No claims have been amended, added or canceled. Therefore, claims 1-28 are present for examination.

35 U.S.C. §102(b) Rejection

"A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). MPEP §2131.

Johnson

The Examiner has rejected claims 1, 11, and 20 under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 5,905,874, hereinafter "Johnson".

Johnson discloses a NIC that includes a buffer for temporarily storing data, a media interface device for transferring data between the buffer and the network, a bus interface for transferring data between the computer system's memory and the buffer, and a local processor for writing a unique value at a predetermined location within the buffer, for periodically comparing the data value at the predetermined location with the unique value, and for initiating data transfer from the buffer to the computer's memory when the data value does not match the unique value. The local processor of the NIC writes the unique value

at the location and then periodically compares the data at that location with the unique value. When the data value is different from the unique value, the local processor has detected new data in that block of memory, and then initiates data transfer of the new data from that block of memory to the memory of the computer system. (See Johnson, Abstract.)

Johnson, however, does not describe, expressly or inherently, a NIC that is "operative to moderate one or more interrupts of an associated computing platform processor, based at least in part on the at least a portion of said contents", as required by, for example, claim 1. Each of the other pending independent claims recites limitations that are similar to these limitations of claim 1, although some differences may exist among the limitations of the other pending independent claims. These similar limitations nevertheless patentably distinguish the claims over Johnson.

In Johnson, a NIC may reduce data transfer latency by transferring data from its buffer to the computer memory by examining its buffer to detect the transfer of new data at an early stage (e.g., prior to an entire data segment being transferred). In Johnson, when the new data is detected, a local processor of the NIC initiates data transfer of the new data by preparing the hardware to initiate transfer of the data. Sometime later, the host processor may be notified, if necessary. (See Johnson, for example, column 3, lines 50-58; column 10, lines 5-11.)

In contrast, Applicants disclose an I/O device, such as a NIC, that "may, in

one embodiment, moderate an interrupt so that the IO device may generate an interrupt of processor 124 of an associated computing platform 120 substantially immediately after receipt of the ACK..." (See Specification, for example, page 10, lines 20-24.) In this particular example, a fragment of electronic data is determined to comprise an ACK packet. Based on the interrupt scheme of this example, the detection of an ACK packet triggers the I/O device to generate an interrupt of the processor of the computing platform in the manner described.

In Johnson, a NIC monitors a buffer to determine when to initiate a data transfer to system memory, but not when to generate an interrupt of a processor of its computing platform. Johnson, therefore, does not describe, expressly or inherently, at the least a NIC that is "operative to moderate one or more interrupts of an associated computing platform processor, based at least in part on the at least a portion of said contents".

Therefore, Johnson does not describe, expressly or inherently, each and every element and limitation of the rejected claims. Consequently, the Examiner has not succeeded in establishing a *prima facie* case of anticipation, and the Applicants respectfully request that the Examiner withdraw the rejection of these claims.

35 U.S.C. §103(a) Rejections

In order to establish a *prima facie* case of obviousness:

"First, there must be some suggestion or motivation, either in the

references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings.

Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations." (Emphasis added). *In re Vaech*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). Manual of Patent Examining Procedure (MPEP), 8th Edition, August 2001, §2143.

Drottar

Claims 2, 4, 12, 13, 21, and 22 have been rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,333,929, hereinafter "Drottar".

Since the Examiner also refers to Johnson in his rejection, the arguments below are premised on the assumption that the Examiner rejects claims 2, 4, 12, 13, 21, and 22 as being unpatentable over Johnson in view of Drottar, rather than solely on Drottar.

Drottar discloses a method to transmit a packet including information describing a bus transaction to be executed at a remote device. (See Drottar, for example, Abstract.)

Applicants respectfully submit that the Examiner has not established a prima facie case of obviousness because:

1. There is no suggestion or motivation in Johnson or in Drottar for

modification.

2. The combination of Johnson and Drottar does not teach or suggest all the claim limitations.

There is no suggestion or motivation in Johnson or in Drottar for modification

The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. *In re Mills*, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990). MPEP §2143.01. Furthermore, even though a combined element may be a "technologically simple concept", the reference must still provide the motivation for the combination. (*In re Kotzab*, 217 F.3d at 1371, 55 USPQ2d at 1318.) MPEP §2143.01.

Johnson is directed to a method for reducing data transfer latency by using a NIC to screen data and initiate transfers to host memory. Drottar is directed to a packet format that is more compatible with distributed computer systems. Neither suggests the desirability for features described in the other reference. For example, Johnson does not suggest any desirability for a different packet format to improve data transfer latency. Furthermore, Drottar does not suggest the desirability for modifying NICs to achieve compatibility.

Therefore, both Johnson and Drottar lack suggestion or motivation for combination with one another.

The combination of Johnson and Drottat does not teach or suggest all the
claim limitations

Even if the motivation for combination existed in either Johnson and Drottat, the combination of the two references does not produce the Applicants' invention as embodied by, for example, claim 1. As discussed above, Johnson does not describe, expressly or inherently, a NIC that is "operative to moderate one or more interrupts of an associated computing platform processor, based at least in part on the at least a portion of said contents". Drottat also does not describe, expressly or inherently, this limitation.

Furthermore, neither Johnson nor Drottat teaches or suggests this limitation. Johnson, for example, teaches away from this limitation because it describes a scheme in which a host processor may be notified of a data transfer after the data transfer occurs, rather than prior to a data transfer. Therefore, the combination of Johnson and Drottat does not teach or suggest all claim limitations.

Since there is no suggestion or motivation in Johnson or in Drottat for modification, and the combination of Johnson and Drottat does not teach or suggest all the claim limitations, Applicants respectfully submit that the Examiner has not established a prima facie case of obviousness. Therefore, Applicants respectfully request that the Examiner withdraw his rejection of claims 2, 4, 12, 13, 21, and 22.

Gentry Jr.

Claims 6-10, 15-19, and 24-28 have been rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,434,651, hereinafter "Gentry".

Since the Examiner also refers to Johnson in his §103 rejection, the arguments below are premised on the assumption that the Examiner rejects claims 6-10, 15-19, and 24-28 as being unpatentable over Johnson in view of Gentry, rather than solely on Gentry.

Gentry discloses a method for polling a NIC. An interrupt that would normally alert a host processor to the arrival of a packet on the network is suspended during a polling mode of operation. Each time the network interface is polled, any waiting packets are processed. However, if a threshold amount of time passes, or a threshold number of packets are received without being processed, interrupts may be enabled to ensure packets are serviced. (See Gentry, for example, column 2, lines 55-65.)

Applicants respectfully submit that the Examiner has not established a prima facie case of obviousness because the combination of Johnson and Gentry does not teach or suggest all the claim limitations.

As discussed above, Johnson does not describe, expressly or inherently, a NIC that is "operative to moderate one or more interrupts of an associated computing platform processor, based at least in part on the at least a portion of

said contents". Gentry also does not describe, expressly or inherently, this limitation because in Gentry, the NIC does not moderate its interrupts based on the contents of the data received.

Furthermore, neither Johnson nor Gentry teaches or suggests this limitation. Johnson, for example, teaches away from this limitation because it describes a scheme in which a host processor is notified of a data transfer after the data transfer occurs, rather than prior to a data transfer. Therefore, the combination of Johnson and Gentry does not teach or suggest all claim limitations.

Since the combination of Johnson and Gentry does not teach or suggest all the claim limitations, Applicants respectfully submit that the Examiner has not established a prima facie case of obviousness. Therefore, Applicants respectfully submit that the Examiner withdraw his rejection of claims 6-10, 15-19, and 24-28.

Conclusion

Applicants respectfully submit that the claims are in condition for allowance. The Examiner is invited to initiate an interview with the undersigned by calling 949-498-0601 if the Examiner believes that such an interview will advance prosecution of this application.